

**SANJIV H. NAIDU, M.D., PH.D.**  
**CURRICULUM VITAE**  
**DEPARTMENT OF ORTHOPAEDICS AND REHABILITATION**  
**500 UNIVERSITY DRIVE, PENN STATE COLLEGE OF MEDICINE**  
**MILTON S. HERSHEY MEDICAL CENTER**  
**HERSHEY, PA. 17033**

**BIOGRAPHICAL DATA:**

Proprietary information deleted.

**PRESENT POSITION:**

Associate Professor of Orthopaedic Surgery  
Penn State College of Medicine  
Medical Director  
Pinnacle Health System  
Hand and Upper Extremity Institute of Central  
Pennsylvania, Mechanicsburg, Pa.

**OFFICE ADDRESS:**

Department of Orthopaedics and Rehabilitation  
Pennsylvania State University  
Milton S. Hershey Medical Center  
500 University Drive, P.O. Box 850, M.C. H089  
Hershey, Pennsylvania 17033-0850  
Telephone: (717) 531-4800  
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**EDUCATIONAL BACKGROUND:**

Proprietary information deleted.

**UNDERGRADUATE:**

Bachelor of Science, Electrical Engineering  
Cornell University  
Ithaca, New York

**GRADUATE:**

Doctor of Medicine (M.D.)  
University of Pennsylvania School of Medicine  
Philadelphia, Pennsylvania

**GRADUATE:**

Doctor of Philosophy (Ph.D.)  
Department of Materials Science and Engineering

The University of Pennsylvania School of Engineering and Applied Science  
(Concentration in Polymer Engineering, Fracture mechanics, Polymer wear, biomechanics and fracture in relation to tribology of both small and large total joint arthroplasty)

**PROFESSIONAL EXPERIENCE:** Design Engineer (very large-scale integrate circuits)  
Division of Microelectronics and Semiconductor Physics  
General Electric Company  
Binghamton, New York  
June, 1982 – June, 1983

**PROFESSIONAL TRAINING:** Instructor in Orthopaedic Surgery  
Orthopaedic Surgery  
University of Pennsylvania  
Philadelphia, Pennsylvania  
June, 1988 – July, 1993

Fellow in Hand Surgery  
University of Pennsylvania  
Philadelphia, Pennsylvania  
July, 1993 – July, 1994

**ACADEMIC APPOINTMENTS:** Associate Professor  
Department of Orthopaedics and Rehabilitation  
Pennsylvania State University  
Milton S. Hershey Medical Center  
Hershey, Pennsylvania  
July, 1994 – Present

**HOSPITAL AFFILITATIONS:** Lebanon Veterans Administration Hospital  
Milton S. Hershey Medical Center  
Harrisburg Hospital  
Polyclinic Hospital  
Community General Hospital  
Seidle Hospital  
Fredericksen Outpatient Center  
Hand and Upper Extremity Institute of Central Pennsylvania

**HONORS AND AWARDS:** Tau Beta Pi National Engineering Honors Society  
Eta Kappa Nu Electrical Engineering Honors Society  
Distinction in Electrical Engineering

**MEMBERSHIPS IN SCIENTIFIC SOCIETIES / PROFESSIONAL ORGANIATIONS:**

Fellow, American Academy of Orthopaedic Surgeons,  
1997-Present  
Fellow, American Society for the Surgery of the Hand,  
2000-Present  
Member, American Association for Advancement of Science,  
1996-Present  
Member, American Chemical Society, 1994-Present  
Member, Association for Advancement in Medical  
Instrumentation, 1990-Present  
Member, Institute of Electronics and Electrical Engineers,  
1983-Present  
Member, New York Academy of Sciences, 1996-Present  
Member, Orthopaedic Research Society, 1996-Present  
Member, Society for Biomaterials, 1996-Present

**EDITORIAL POSITIONS:**

Associate Editor, *Journal of Hand Surgery (Am)*, Elected 1999  
Consultant to the editorial board, *Journal of Hand Surgery*,  
1994-1998  
Section Editor (wrist and hand), *Current Opinion in  
Orthopaedics*, 11(4), 2000  
Section Editor (wrist and hand), *Current Opinion in  
Orthopaedics*, 12(4), 2001  
Section Editor (wrist and hand), *Current Opinion in  
Orthopaedics*, 13(4), 2002  
Section Editor (wrist and hand), *Current Opinion in  
Orthopaedics*, 14 (4), 2003

**COMMITTEES:**

Rheumatology Section Head Search Committee -1998

**CERTIFICATIONS / LICENSURE:**

LICENSURE: Pennsylvania Unrestricted License to Practice Medicine and  
Surgery  
Diplomate of the National Board of Medical Examiners

CERTIFICATIONS: American Board of Orthopaedic Surgery  
Certificate of Added Qualifications in Hand Surgery

**PATENTS:**

U.S. Patent pending

## RESEARCH:

COMPLETED:                   “Rolamite Finger Joint”  
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Principal Investigator: S.H. Naidu, M.D.  
Direct Cost: --  
1994-1996

## RESEARCH (continued):

IN PROGRESS:                   “Development of CTS Risk Assessment Model:  
A Case-Control Study Among Industry Workers”  
PHS  
Principal Investigator: ---; Co-Investigator:  
S.H. Naidu, M.D.  
12/01/99-11/30/01

“The Effect of Radiation on Periprosthetic Osteolysis:  
An Animal Model”  
Arthritis Foundation  
Principal Investigator: ---; Co-Investigator:  
S.H. Naidu, M.D.  
01/01/01-06/30/03

“The Effect of Radiation on Periprosthetic Osteolysis Following  
Total Joint Arthroplasty”  
Principal Investigator: S.H. Naidu, M.D.  
07/01/01-06/30/03

PROPOSED:  
Proprietary information deleted.

## SERVICE TO THE PROFESSION:

Voting Panel Member, Food and Drug Administration (FDA)-2002- 2006  
Consulting Panel Member, FDA 1998-2001  
Orthopaedic and Rehabilitation Panel Center for Devices and  
Radiological Health (Rockville, MD)

- Avanta PIP Finger Joint, and Avanta CMC Joint for the Thumb (primary reviewer), October 8, 1998.
- Premarket approval of Norian SRS bone cement (primary clinical reviewer), October 9, 1998.
- Premarket approval (PMA) of BAK/Cervical Interbody Fusion System (Sulzer Medica), May 4, 2000.
- Premarket approval Ossatron, Healthtronics, May 5, 2000.
- Panel Meeting, PMA Ascension Finger Joint, August 8 and 9, 2001
- Panel Meeting, PMA InFuse Bone Graft/LT-CAGE Lumbar Tapered fusion device , January 9 and 10, 2002

- Panel Meeting, PMA of Independent IBOT wheelchair, Johnson & Johnson, November 20, 2002
- Panel Meeting, PMA Reviewer Preclinical data of rhBMP2/ACS (Induct os) in treatment of open tibia fractures, Wyeth Pharmaceuticals, November 21, 2002

Mentor, Doctorate / Thesis Committee  
Department of Mechanical Engineering  
The Pennsylvania State University  
State College, PA

**REFERENCES:** Proprietary information deleted.

**PUBLICATIONS:**

PEER-REVIEWED:

1. Naidu S, Heppenstall RB: Compartment Syndrome of the Hand and Forearm. HAND CLIN N AM 10(1):13-27, February, 1994.
2. Naidu S, Reilly T, Heppenstall RB: Intertrochanteric Fractures. OPER ORTHOP 4(2):66-73, 1994.
3. Iannotti JP, Naidu S, Noguchi Y, Hunt RM, Brighton CT: Growth Plate Matrix Vesicle Biogenesis. CLIN ORTHOP 306:222-229, 1994.
4. Naidu S, Beredjikian P, Adler L, Bora FW, Baker D: In Vivo Inflammatory Response to Silicone Elastomer Particulate Debris. J HAND SURG [AM] 21(3):496-500, May, 1996.
5. Naidu S, Warner C: Mechanical Stamping: A Cause of Fatigue Fracture. CLIN ORTHOP 328:261-267, Jul, 1996.
6. Naidu S, Cuckler JM, Burkholter T, Ducheyner P: Initial Stability of a Modular Uncemented, Porous-Coated Femoral Stem: A Mechanical Study. AM J ORTHOP 25(12):829-834, Dec, 1996.
7. Naidu S, Bixler B, Moulton MJR: Radiation Induced Changes in Ultra High Molecular Weight Polyethylene (UHMWPE). J BONE JOINT DIS 6(4):11, 1997.
8. Naidu S, Bixler B, Moulton MJR: Radiation-induced Changes in Ultra High Molecular Weight Polyethylene (UHMWPE) Implant Components. ORTHOPEDICS 20(2):137-142, Feb, 1997.Mar, 1997.

**PUBLICATIONS:**

PEER-REVIEWED: (continued)

9. Naidu S, Graham J, Laird C: Pre- and Post-Implantation Dynamic Mechanical Properties of Silastic<sup>®</sup> HP-100 Finger Joints. J HAND SURG [AM] 22(2):299-301, Mar, 1997.
10. Naidu S, Capo JT, Moulton MJR, Ciccone WP II, Radin A: Percutaneous Pinning of Distal Radius Fractures: A Biomechanical Study. J HAND SURG [AM] 22(2):252-257, Mar, 1997.
11. Naidu S: Identification of Orthopaedic Wear Debris, (Letter to the Editor). J BONE JOINT SURG 79(4):635, Apr, 1997.
12. Naidu S, Moulton MJR, Cuckler JM, Ducheyne P.: Orderly Oriented Wire Mesh: A Novel Porous Coating ORTHOPEDICS 20(5):437-441; Discussion 441-442, May, 1997.
13. Naidu S, Ostrov B, Pellegrini VD: Isolated digital swelling as the Initial Presentation of Pauciarticular Juvenile Rheumatoid Arthritis. J HAND SURG [AM] 22:653-657, Jul, 1997.
14. Naidu S, Bixler B, Moulton MJR, Capo J, Radin A: Percutaneous Pin Fixation of Proximal Humerus Fractures. ORTHOPEDICS 20(11):1073-1076, Nov, 1997.
15. You H, Simmons Z, Freivalds A, Kothari MJ, Naidu SH: Relationships Between Clinical Symptom Severity Scales and Nerve Conduction Measures in Carpal Tunnel Syndrome. MUSCLE NERVE 22(4):497-501, Apr, 1999.
16. Ostrov B, Pellegrini VD, Naidu SH.: Small Hand Joint Involvement in Juvenile Rheumatoid Arthritis. J PEDIATR 136(1):134-135, Jan, 2000.
17. Moulton MJR, Parentis MA, Kelly MJ, Jacobs C, Naidu SH, Pellegrini VD Jr: The Influence of Metacarpophalangeal Joint Position on Thumb Basal Joint Loading. J BONE JOINT SURG 83A:209-216, 2001.
18. Huang K, Naidu SH.: Total Wrist Arthroplasty; Is There a Role? CURRENT OPINIONS IN ORTHOPAEDICS 13(4): 260 - 268 ,2002.
19. Naidu SH, Fisher J, Heistand M, Kothari MJ: Median Nerve Function in Patients Undergoing Carpal Tunnel Release: Pre-op and post-op nerve conduction. ELECTROMYOGRAPHY AND CLINICAL NEUROPHYSIOLOGY (In Press 2003).
20. Naidu SH, Kothari MJ: Thoracic Outlet Syndrome; does fiction outweigh facts? CURRENT OPINIONS IN ORTHOPAEDICS 14(4) (In Press 2003).

**PUBLICATIONS:**

PEER-REVIEWED: (continued)

21. Naidu SH , Harris T: What is new in Tapezio-metacarpal joint replacement arthroplasty. CURRENT OPINIONS IN ORTHOPAEDICS 14(4) (In press 2003).

ABSTRACTS:

1. Ianotti JP, Naidu S, Noguchi Y, Hunt RM, Brighton CT: Calcium Induced Matrix Vesicle Biogenesis. TRANS ORTHOP RES SOC 14:125, 1989.
2. Naidu S, Ducheyne P: Surface Pore Morphology of Orderly Oriented Wire Mesh (OOWM) as a Determinant of Early Bone Ingrowth Fixation. ORTHOP TRANS 16(2):469, 1992.
3. Naidu S, Cuckler JM, Burkholter T, Ducheyne P, Cohen SC: The Role of Proximal and Distal Canal Fit and Fill in Initial Stability of a Porous Coated Modular Hip Stem. ORTHOP TRANS 16(2):498, 1992.
4. Naidu S, Cuckler JM, Burkholter T, Ducheyne P, Cohen CS: The Role of Proximal and Distal Canal Fit and Fill in Initial Stability of a Porous Coated Modular Hip Stem. TRANS ORTHOP RES SOC 17:294, 1992.
5. Naidu S, Ducheyne P: Surface Pore Morphology of Orderly Oriented Wire Mesh (OOWM) as a Determinant of Early Bone Ingrowth Fixation. TRANS ORTHOP RES SOC 17:367, 1992.
6. Naidu S, Heppenstall RB, Esterhai JL, Wright DG, Brighton CT: Clavicle Non-Union, Results of Treatment in 43 Patients with Electricity, Open Reduction and Autogenous Bone Grafting, and Resection of the Mid-Clavicle. ORTHOP TRANS 18(4):1072, 1994.
7. Beredjikian P, Naidu S, Baker D, Schumaker R, Cuckler JM, Bora FW: Inflammatory Response to Silastic<sup>®</sup> HP 100 in an In Vivo Rat Pouch Model TRANS ORTHOP RES SOC 20:772, 1995.
8. Naidu S, Beredjikian P, Baker D, Schumaker R, Cuckler JM, Bora FW: Inflammatory Response to Silastic<sup>®</sup> HP 100: An In Vivo Study. ORTHOP TRANS 19(3):744, 1995.
9. Naidu S, Bixler B, Capo J, Moulton MJR, Radin A: Percutaneous Pin Fixation of Proximal Humerus Fractures; A Biomechanical Study. ORTHOP TRANS 20(1):11, 1996.
10. Naidu S, Capo J, Moulton MJR, Ciccone WJ, Radin A.: Percutaneous Pin Fixation of Distal Radius Fractures; A Biomechanical Study. ORTHOP TRANS 20(4):864, 1997.

PUBLICATIONS (continued):

ABSTRACTS (continued):

11. Naidu S, Bixler B, Capo J, Moulton MJR, Radin A: Percutaneous Pin Fixation of Proximal Humerus Fractures; A Biomechanical Study. ORTHOP TRANS 20(4):865, 1997.
12. Naidu S: Silicone Elastomers and Silicone Synovitis: Materials and Basic Science. SEMIN ARTHROPLASTY 8(2):191-197, 1997.
13. Naidu SH, Capo JT: Upper Extremity Compartment Syndromes. TECHN ORTHOP 12(2):117-126, 1997.
15. Jacobs CR, Davis BR, Naidu S, Dauskardt RH, Pellegrini VD: Small amounts of PBMA Increase the Fatigue Lifetime of Acrylic Bone Cement. TRANS ORTHOP RES SOC, 1998.
16. Naidu S, Kothari M, Heistand M, Simmons Z, Pellegrini VD: Early Electrophysiologic Recovery Following Open Carpal Tunnel Decompression. ORTHOP TRANS, 1998.
17. Jacobs CR, Davis BR, Naidu SH, Pellegrini VD: Comparison of the fatigue lifetimes of Simplex P and osteobond bone cement. ADV BIOENGIN 39:353-354, 1998.
18. You H, Simmons Z, Freivalds A, Kothari M, Naidu S.: Development and validation of a risk assessment model for carpal tunnel syndrome. INT SOC OCCUP ERGON SAFETY, 1999.
19. Naidu SH, Kothari MJ, Simmons Z, Pellegrini VD.: Early Clinical and Electrophysiologic Recovery Post Carpal Tunnel Release. Paper #21, ASSH . Seattle , WA, 2000.

BOOKS AND BOOK CHAPTERS:

1. Naidu SH, et. al.: In Vivo Inflammatory Response to Silicone Elastomer Debris. *The Year Book Of Hand Surgery*, Mosby Year Book Inc, Chicago, IL, 1997, pp. 375-378.
2. Parentis M, Pellegrini VD, Jr., Naidu SH: Osteoarthritis. In Kasdan, Jebson (Eds): *Hand Secrets*, Hanley and Belfus Inc, Philadelphia, PA, 1998, pp. 11-16.
3. Naidu SH: In Vitro Testing of the Stability of Femoral Components. In An YH, Draughn RA (Eds): *Mechanical Testing of Bone*, CRC Press, Boca Raton, FL, Oct, 1999, pp. 541-550.
4. Schneider D, Parentis M, Pellegrini VD, Jr., Naidu SH: Osteoarthritis. In Kasdan, Jebson (Eds): *Hand Secrets*, Hanley and Belfus Inc, Philadelphia, PA, 2002, pp. 45-

**PUBLICATIONS (continued):**

5. Temple J, Naidu SH: Arthritis of the Hand and Wrist. In Bozentka, Beredjiklian (In Press).

#### BOOK REVIEWS/ EDITORIALS.

1. Naidu S: Year Book of Orthopaedics. J HAND SURG 18A:173, 1993.
2. Naidu S: The Hand: Diagnosis and Indications. (G. Lister). J HAND SURG 20A:519, May, 1995.
3. Naidu S: Clinical Mechanics of the Hand, (P. Brand and A. Hollister). J HAND SURG, 25A:373, 2000.
4. Naidu S: Hand and Wrist Editorial Overview. CURRENT OPINIONS IN ORTHOPAEDICS, 12:275, 2001.
5. Naidu S: Hand and Wrist Editorial Overview. CURRENT OPINIONS IN ORTHOPAEDICS, 13(4): 245, 2002.

#### MISCELLANEOUS:

1. Quoted in "Panel recommends approval of MCP joint replacement device". ORTHOPAEDICS TODAY. 21(10): 4, October 2001.

#### MANUSCRIPTS SUBMITTED FOR PUBLICATION:

1. Naidu S, Heppenstall RB, Esterhai JL, Wright DG, Brighton CT: Clavicle Non-Union, Results of Treatment with Electricity, DCP Fixation and Autogenous Bone Grafting, and Resection of the non-Union in 46 Patients. (Submitted to CLIN ORTHOP 10, 1999).
2. Naidu S, Aguirre R, Deol G: The concept of Distraction in External Fixation of Distal Radius Fractures. (Submitted to J HAND SURG).
3. Hauck RM, Heistand M, Naidu SH, Simmons Z, Kothari MJ: Correlation of Needle Electromyography, Nerve Conduction Studies, and Imaging Studies in Patients with Radiculopathy. MUSCLE NERVE (in press).

#### MANUSCRIPTS IN PROGRESS:

Proprietary information deleted.

#### PROFESSIONAL PRESENTATIONS:

##### INTERNATIONAL:

1. “Early Electrophysiologic Recovery Following Open Carpal Tunnel Decompression”, Seventh Congress of the International Federation of Societies for Surgery of the Hand, Vancouver, British Columbia, Canada, May 27, 1998. (Presenter)
2. “Development and Validation of a Risk Assessment Model for Carpal Tunnel Syndrome”, (You H, Simmons Z, Freivalds A, Kothari M, Naidu S), International Society For Occupational Ergonomics And Safety, September 6, 1999. (Presenter – You).
3. “A Comparison of Wear Debris Induced Osteolysis Along a Cemented and Cementless Interface: An Animal Model in the Rabbit”, (Bergandi JA, Feinblatt J, Rumi MN, Saunders MM, Naidu SH, Pellegrini VD), Eastern Orthopaedic Association, 32<sup>nd</sup> Annual Meeting, Southampton, Bermuda, October 10-14, 2001.

#### NATIONAL:

1. “Surface Pore Morphology of Orderly Oriented Wire Mesh (OOWM) as a Determinant of Early Bone Ingrowth Fixation”, Orthopaedic Research Society, Washington, DC 1992.
2. “A Quantitative In Vivo Assessment of the Inflammatory Response to Silicone Elastomer Particulates”, Orthopaedic Research Society, Orlando, FL, February, 1995. (Poster)
3. “Inflammatory Response to High Performance Silastic<sup>®</sup> Particles”, American Orthopaedic Association, Greenbrier, White Sulphur Springs, VA, June, 1995. (Presenter)
4. “An in Vivo Study of Inflammatory Response to High Performance, HP-100 Silastic<sup>®</sup> Particles”, American Society for Surgery of the Hand, San Francisco, CA, September, 1995. (Presenter)
5. “Percutaneous Pin Fixation of Proximal Humerus Fractures: A Biomechanical Study”, American Academy of Orthopaedic Surgeons, Atlanta, GA, February 22, 1996. (Presenter)
6. “Pre- and Post-Implantation Dynamic Mechanical Properties of Silastic<sup>®</sup> HP-100 Finger Joints”, American Society for Surgery of the Hand, Nashville, TN, September 29, 1996. (Poster)

#### **PROFESSIONAL PRESENTATIONS: (continued)**

7. “Two-Dimension Rigid Body Spring Modeling of the Wrist”, American Society for Surgery of the Hand, Nashville, TN, September 29, 1996. (Poster)
8. “Electrophysiologic Outcome Study of Open Carpal Tunnel Decompression”, American Association for the Surgery of the Hand, Boca Raton, FL, January 9, 1997. (Presenter)

9. “Percutaneous Pinning of Distal Radius Fractures”, American Association for the Surgery of the Hand, Boca Raton, FL, January 9, 1997. (Poster)
10. “Percutaneous Pinning of Distal Radius Fractures: A Biomechanical Study”, American Academy of Orthopaedic Surgeons, San Francisco, CA, February 14, 1997. (Presenter)
11. “Early Electrophysiologic Recovery Following Open Carpal Tunnel Decompression”, American Academy of Orthopaedic Surgeons, New Orleans, LA, March 21, 1998. (Presenter)
12. “Small Amounts of PBMA Increase the Fatigue Lifetime of Acrylic Bone Cement”, Orthopaedic Research Society 44th Annual Meeting, New Orleans, LA, March 19, 1998. (Poster)
13. “Fractographic Basis for Silicone Synovitis: A Comparison of Failed Silicone Trapezial, and Silicone Metacarpophalangeal Implants”, Fifty-third Annual Meeting of the American Society for Surgery of the Hand, Minneapolis, MN, September 12, 1998. (Presenter)
14. “Immunocytochemical Detection of Estrogen Receptors in the Beak Ligament of the Trapeziometacarpal Joint: A Role for Estrogen in the Pathogenesis of Osteoarthritis of this Joint”, Residents Conference, American Society for Surgery of the Hand, Boston, MA, September 1, 1999. (Presenter – Dr. Mustasim Rumi)
15. “Carpal Height Index as the Radiographic Determinant of Distraction Force Across the Wrist”, Residents Conference, American Society for Surgery of the Hand, Boston, MA, September 1, 1999. (Presenter – Dr. Gurvinder Deol)
16. “The Relationship of Upper Extremity Compressive Dressings to Forearm Compartment Pressures and the Effect of Univalve and Bivalve Release”, Residents Conference, American Society for Surgery of the Hand, Boston, MA, September 1, 1999. (Presenter – Dr. David Schneider)
17. “Early Electrophysiologic Recovery After Open Carpal Tunnel Decompression”, Fifty-fifth Annual Meeting of the American Society for Surgery of the Hand Conference, Seattle, WA, October 5-7, 2000. (Presenter)
18. “Immunocytochemical Detection of Estrogen Receptors in the Beak Ligament of the Trapeziometacarpal Joint: A Role for Estrogen in the Pathogenesis of Osteoarthritis of this Joint”, Fifty-fifth Annual Meeting of the American Society for Surgery of the Hand Conference, Seattle, WA, October 5-7, 2000. (Poster)
19. “Biomechanical Study of Ligament Reconstruction and Tendon Interposition Methods”, Fifty-fifth Annual Meeting of the American Society for Surgery of the Hand Conference, Seattle, WA, October 5-7, 2000. (Poster)

20. “The Relationship of Upper Extremity Compressive Dressings to Forearm Compartment Pressures and the Effect of Univalve and Bivalve Release”, (Schneider DJ, Naidu SH, Pellegrini VD Jr), Fifty-fifth Annual Meeting of the American Society for Surgery of the Hand, Seattle, WA, October 5-7, 2000. (Presenter – Dr. David Schneider)
21. “A Comparison of Wear Debris Induced Osteolysis Along a Cemented and Cementless Interface; An Animal Model in the Rabbit”, (Bergandi, Naidu, Pellegrini), American Academy of Orthopaedic Surgeons paper #211, March 2, 2001. (Presenter – Dr. Jason Bergandi)

#### REGIONAL:

1. “Clavicle Non-union: Results of Electricity, Plating and Bone Grafting, and Excision of Middle One-third”, Philadelphia Hand Society, Philadelphia, PA, June, 1994. (Presenter)
2. “Inflammatory Response to Silicone Elastomer Particles”, Pennsylvania Orthopaedic Society, Philadelphia, PA, November 17, 1995. (Presenter)
3. “Pre and Post Implantation Dynamic Mechanical Properties of Silastic® HP-100 Finger Joints”, Pennsylvania Orthopaedic Society, Philadelphia, PA, November 17, 1995. (Presenter)
4. “External Fixation of Distal Radius Fractures”, Pennsylvania Orthopaedic Society, Pittsburgh, PA, November 15, 1996. (Presenter)
5. “Percutaneous Pinning of Distal Radius Fractures”, Pennsylvania Orthopaedic Society, Pittsburgh, PA, November 15, 1996. (Presenter)

#### SEMINARS AND WORKSHOPS/REVIEW COURSES :

1. “Prosthetic Replacement Arthroplasty of the Basal Joint”, (Instructional Course Series), American Society for the Surgery of the Hand, Nashville, TN, September 29, 1996. (Presenter)
2. “Prosthetic Replacement Arthroplasty of the Basal Joint”, (Instructional Course Series), American Society for the Surgery of the Hand, Denver, CO, September 11, 1997. (Presenter)
3. “Prosthetic Replacement Arthroplasty of the Basal Joint”, (Instructional Course Series), Fifty-third Annual Meeting of the American Society for the Surgery of the Hand, Minneapolis, MN, September 10, 1998. (Presenter)
4. “Prosthetic Replacement Arthroplasty of the Basal Joint”, (Instructional Course Series), AAOS convention Dallas, 2/13/2002. ICS #113 (Presenter)

5. “Congenital differences of the Upper Extremity”, The Johns Hopkins Orthopaedic Review Course, Baltimore, Maryland, 6/25/2003. (Presenter)
6. “Tendon Transfers for Restoration of Hand and Upper Extremity Function”, The Johns Hopkins Orthopaedic Review Course, Baltimore, Maryland, 6/25/2003. (Presenter)
7. Exon-Intron, Inc., New Gene Discovery Conference, Innsbruck, Austria, July 17-21, 2000. (Student)

### **OUTREACH ACTIVITIES:**

1. “Joint Replacement Arthroplasty of the Hand”  
(Invited Lecturer)  
Primary Care Physicians  
The Pennsylvania State University  
The Milton S. Hershey Medical Center  
Hershey, PA  
February, 1995
2. “Hand and Wrist Soft Tissue Injuries”  
(Invited Lecturer)  
Annual Sports Medicine Symposium  
The Pennsylvania State University  
The Milton S. Hershey Medical Center  
Hershey, PA  
March, 1995
3. “Materials in Upper Extremity Joint Replacement Arthroplasty”  
(Invited Lecturer)  
Lab for Research on the Structure of Matter  
University of Pennsylvania  
Philadelphia, PA  
August 2, 1995
4. “Principal Care of Hand Injuries in the Athlete”  
(Invited Lecturer)  
Principal Care Symposium  
The Pennsylvania State University  
The Milton S. Hershey Medical Center  
Hershey, PA  
September 23, 1995
5. “New Clinical and Experimental Concepts in Treatment of Distal Radius Fractures”  
(Invited Lecturer)  
Surgeons  
The Pennsylvania State University

The Milton S. Hershey Medical Center  
Hershey, PA  
April 4, 1996

6. “External Fixation and Pinning of Distal Radius Fractures”  
(Invited Lecturer)  
Challenges in Orthopaedic Trauma  
The Pennsylvania State University  
The Milton S. Hershey Medical Center  
Hershey, PA  
June 1, 1996
7. “Scaphoid Fractures”  
(Invited Lecturer)  
Lehigh Valley Principal Care Orthopaedic Symposium  
Lehigh Valley Hospital  
Allentown, PA  
December 7, 1996
8. “Hand Evaluation and Common Hand Entities”  
(Invited Lecturer)  
First Annual Orthopaedics Program for Principal Care Physicians  
The Pennsylvania State University  
The Milton S. Hershey Medical Center  
Hershey, PA  
May 10, 1997
9. “Materials Science and Clinical Science of Silicone Elastomer Implants in Small Joint Replacement Arthroplasty”  
(Invited Lecturer)  
Gillette Scientists  
Gillette Research Institute  
Gaithersburg, MD  
August 22, 1997
10. “Carpal Tunnel Syndrome”  
(Invited Lecturer)  
Lancaster County Dental Assistants Association  
New Holland, PA  
March 10, 2000
11. “Upper Extremity Occupational Disorders”  
(Invited Lecturer)  
Corvel Corporation  
Fredericksen Outpatient Center  
Mechanicsburg, PA  
April 10, 2002

## **TEACHING ACTIVITIES:**

1. “Reflex Sympathetic Dystrophy”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, March 9, 1995. (with Peter D. Cummings, M.D.)
2. “Hand/Wrist Arthroplasty”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, April 27, 1995.
3. “Prosthetic Joint Arthroplasty”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, April 25, 1996.
4. “Tendon Transfers”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, July 5, 1996.
5. “Peripheral Nerve Physiology, Anatomy, and Pathology”, Basic Science Course, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, February 3, 1997.
6. “Silicone Elastomers: Materials and Basic Science”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, May 28, 1997.
7. “Problems of the Distal Radioulnar Joint”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, October 1, 1997.
8. “Tendon Transfers”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, January 28, 1998.
9. “Carpal Instability”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, April 1, 1998.
10. “Peripheral Nerve Physiology, Anatomy, and Pathology”, Basic Science Course, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, July 27, 1998.
11. “Peripheral Nerve Physiology, Anatomy, and Pathology”, Basic Science Course, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, October 14, 1998.

**TEACHING ACTIVITIES (continued):**

12. “Distal Radius Fractures”, Grand Rounds, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, April 15, 1999.
13. “Peripheral Nerve and Stats”, Basic Science Course, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, August 16, 1999.
14. “Scapohid Fractures”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, August 23, 1999.
15. “Finger Fractures”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, September 22, 1999.
16. “Wrist Fusion/Proximal Row Carpectomy”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, October 27, 1999.
17. “Ulnar Nerve Entrapment (Elbow, Wrist)”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, November 3, 1999.
18. “Rheumatoid Arthritis / Soft Tissue”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, December 1, 1999.
19. “Occupational Disorders”, Grand Rounds, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, December 16, 1999.
20. “Gamekeeper’s Mallet Finger”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, January 1, 2000.
21. “Carpal Instability (Acute and Chronic)”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, February 2, 2000.
22. “The Distal Radio-Ulnar Joint”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, March 1, 2000.

**TEACHING ACTIVITIES (continued):**

23. “Tendon Transfers ‘Ulnar Nerve’”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, April 5, 2000.
24. “Tendon Transfers ‘Radial/Median’”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, May 3, 2000.
25. “Small Joint Injuries”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, June 7, 2000.
26. “Elbow / Forearm Anatomy”, Grand Rounds, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, July 20, 2000. (With Vincent D. Pellegrini, Jr., M.D.)
27. “Hand, Wrist”, Anatomy Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, July 27, 2000.
28. “Hand / Wrist Anatomy”, Grand Rounds, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, August 3, 2000. (With Vincent D. Pellegrini, Jr., M.D.)
29. “Compartment Syndrome”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, August 16, 2000.
30. “Distal Radius Fractures”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, September 20, 2000.
31. “Hand Arthroplasty”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, October 18, 2000.
32. “Dupuytren’s”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, November 15, 2000.
33. “Rheumatoid Arthritis”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, December 20, 2000.

**TEACHING ACTIVITIES (continued):**

34. “Tendon Transfers”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, January 17, 2001.
35. “Extensor Tendon Deformity”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, February 21, 2001.
36. “Occupational Disorders / Worker’s Compensation”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, March 21, 2001.
37. “Stiff Joints”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, April 18, 2001.
38. “Upper Extremity (Elbow / Hand)”, Anatomy Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, August 2, 2001. (With Dr. Vincent D. Pellegrini, Jr., M.D.)
39. “Scaphoid Fractures”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, September 19, 2001.
40. “Rheumatoid Arthritis”, Hand Conference, Department of Orthopaedics and Rehabilitation, Penn State University College of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, October 17, 2001.